

REMARKS

In the Office Action, the Examiner rejected claims 1, 5-9, 11-22, 26-30, 32-43 and 47-61. By the present Response, the Applicant amends claims 1, 5, 6, 14-17, 22, 26-28, 35-38, 43, 47-49 and 52-55. New claims 62-69 are presently added. The newly added claims and the present amendments do not add any new matter. Upon entry of these amendments, claims 1, 5-9, 11-22, 26-30, 32-43 and 47-69 will be pending in the present application and are believed to be in condition for allowance. In view of the foregoing amendments and the following remarks, the Applicant respectfully requests reconsideration and allowance of all pending claims.

Claim Rejections Under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 14-20, 35-41 and 52-61 under 35 U.S.C. § 102(b) as being anticipated by Gano, U.S. Patent No. 5,507,346 (“the Gano reference”). The Applicant respectfully traverses this rejection.

Anticipation under 35 U.S.C. § 102 can be found only if a single reference shows exactly what is claimed. *See Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773 (Fed. Cir.1985). For a prior art reference to anticipate under 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference. *See In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir.1990). Thus, if the claims contain even one recitation not found in the cited reference, the reference does not anticipate the claimed subject matter.

The Applicant asserts that the Gano reference fails to disclose all of the recited features of amended independent claims 14, 35 and 52. Specifically, for example, the Applicant asserts that the Gano reference fails to teach a sleeve of a casing with a “casing coating” of “stress-absorbing material” that “*substantially covers a circumferential area* of the sleeve *along a length* of the sleeve,” as recited in claims 14, 35, and 52. (Emphasis added.)

In contrast to the present claim features, the Gano reference merely teaches a “composite outer structure 38 that is comprised of a plurality of overlapping, composite band-like plies arranged in a plurality of *opposed helices* 40, 42.” *See* Gano et al., col. 8, lines 22-26 (emphasis added). Rather than forming a coating that “*substantially covers a*

circumferential area of the sleeve along a length of the sleeve,” as recited by the present claims, the opposed helices 40, 42 of the Gano reference merely form a “*gridwork* helical pattern.” *See* Gano et al., col. 8, lines 22-37 (emphasis added).

The Applicant stresses that the gridwork helical pattern of the Gano reference leaves exposed areas or “passageways” along any length of the casing 12 upon which the outer structure 38 is applied. *See* Gano et al., col. 8, lines 55-57. Indeed, this is clearly illustrated by Figure 2 of the Gano reference, which shows substantial portions of exposed casing 12. Further, the substantial exposed areas along the casing 12 in the Gano reference are an intended and direct result of the use of the helices, which are intended to create turbulent effects on drilling fluids and slurries. *See* Gano et al., col. 8, lines 55-57; col. 8, line 62 – col. 9, line 26. In other words, the areas of the casing 12 that are exposed by the openings in the gridwork helical pattern are apparently necessary to achieve the function described by the Gano reference. Accordingly, the Applicant asserts that the composite outer structure 38 of the Gano reference is clearly not equivalent to a coating that *substantially covers a circumferential area along a length of the sleeve*, as presently recited. Thus, the Applicant asserts that the Gano reference fails to anticipate amended independent claims 14, 35 and 52.

The Applicant also maintains that the Gano reference does not teach a “casing *coating*,” as recited in claims 14, 35 and 52. (Emphasis added). Rather, the Gano reference merely teaches that the helical patterns are formed on the outer surface 32 of the composite liner 26 by applying epoxy resin to a band of fiberglass, cloth tape, or filament that is applied on the outer surface of the composite liner. *See* Gano et al., col. 10, lines 51-54. In other words, it appears that the Gano reference merely teaches that the epoxy resin is essentially taped onto the composite liner 26. Applicant asserts that one of ordinary skill in the art would not consider this a “casing *coating*,” as recited in claims 14, 35 and 52. (Emphasis added.) Indeed, Applicant stresses that equating the presently recited casing *coating* with epoxy resin coupled to a casing via bands of fiberglass or tape, as taught by the Gano reference, is similar to arguing that a picture hung on a wall is a wall coating.

In the Response to Arguments portion of the Final Office Action, the Examiner cited a definition for “coating” that the Examiner apparently selected to support the argument that the

bands of fiberglass taught by the Gano reference are equivalent to a coating. *See* Final Office Action, page 5. Specifically, the Examiner submitted that a coating is “one substance covering another.” *See id.* However, the Applicant respectfully reminds the Examiner that claim language is not merely to be interpreted to support the Examiner’s arguments. Rather, claim language is to be interpreted such that it is consistent with the *specification*. *See In re Prater*, 415 F.2d 1393, 1404-05, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969); *see also In re Morris*, 127 F.3d 1048, 1054-55, 44 U.S.P.Q.2d 1023, 1027-28 (Fed. Cir. 1997); *see also* M.P.E.P. §§ 608.01(o) and 2111. That is, claim terms must be given their plain meaning unless the Applicant has provided a clear definition in the specification. *See In re Zletz*, 893 F.2d 319, 321, 13 U.S.P.Q.2d 1320, 1322 (Fed. Cir. 1989). To clarify, the plain meaning refers to an interpretation by those of ordinary skill in the art. *See In re Sneed*, 710 F.2d 1544, 218 U.S.P.Q. 385 (Fed. Cir. 1983). Accordingly, the Applicant asserts that, based on the specification for the present application, the term “coating” does not merely refer to “one substance covering another.” Further, the Applicant stresses that one of ordinary skill in the art would not confuse bands of fiberglass attached (e.g., via a tape) to a sleeve, as essentially described in the Gano reference, with a casing coating (e.g., stress-absorbing material that is *coated* on the sleeve), as presently claimed. Thus, the Applicant again asserts that the Gano reference fails to anticipate amended independent claims 14, 35 and 52.

Turning to dependent claims 15, 16, 36, 37, 53 and 54, the Applicant respectfully asserts that the Gano reference certainly fails to disclose that a casing coating is “directly coated” on an exterior or interior surface of a sleeve. In contrast, as set forth above, the opposing helices 40, 42 of the Gano reference are formed by simultaneously applying conventional epoxy resins and winding bands of fiberglass or cloth tape or filaments onto the outer surface of the composite liner 26. *See Gano et al.*, col. 8, lines 41-45. Accordingly, claims 15, 16, 36, 37, 53 and 54 are clearly allowable over the Gano reference.

Regarding dependent claims 17, 28, 38, and 55, the Applicant respectfully asserts that the Gano reference also fails to disclose a casing coating that has “a *substantially consistent thickness* of less than about three inches *completely* covering the circumferential area of the sleeve along the length of the sleeve.” (Emphasis added). Rather, as discussed above, the Gano reference merely discloses a “*gridwork* helical pattern.” *See Gano et al.*, col. 8, lines 22-

37 (emphasis added). Indeed, the Gano reference actually teaches that “high spots or standoffs” are intentionally formed to centralize the composite liner 26 within an interior of the casing 12. Accordingly, claims 17, 38, and 55 are clearly allowable over the Gano reference.

Regarding dependent claims 59 and 61, the Applicant asserts that the Examiner has not sufficiently provided support for the recitation of “*determining* a high stress zone . . . and . . . placing the casing into the high stress zone.” (Emphasis added). The Examiner merely stated that “the casing is to be used in multi-lateral wells. Multi-lateral wells are high stress areas. Therefore, the method comprises determining a high stress area of a formation and placing the casing in the high stress area.” See Final Office Action, page 3. The Applicant asserts that the Examiner merely relied on a theory of inherency. Accordingly, the Applicant reminds the Examiner that if the Examiner relies on a theory of inherency, the extrinsic evidence must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 49 U.S.P.Q.2d 1949 (Fed. Cir. 1999) (Emphasis Added). The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. *Id.* In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). The Examiner, in presenting the inherency argument, bears the evidentiary burden and must adequately satisfy this burden. See *id.* Thus, if the Examiner maintains the rejection of claims 59 and 61 in a future Office Action, the Applicant requests that the Examiner provide sufficient support for the rejection.

In view of the arguments and amendments set forth above, Applicant requests that the Examiner withdraw rejections under 35 U.S.C. § 102 of independent claims 14, 35 and 52, and the claims depending therefrom. Further, Applicant request that the Examiner provide an indication of allowance for independent claims 14, 35 and 52, and the claims depending therefrom.

Claim Rejections Under 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejected claims 1, 5-9, 11, 13, 21, 22, 26-30, 32, 34, 42, 43 and 47-51 under 35 U.S.C. § 103(a) as being obvious over the Gano reference. Additionally, the Examiner rejected claims 1, 5-9, 11, 13-21, 26-30, 32, 34-43 and 47-61 under 35 U.S.C. § 103(a) as being unpatentable over the Gano reference in view of Bol, U.S. Patent No. 4,716,965 (“the Bol reference”). The Applicant respectfully traverses these rejections.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (P.T.O. Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (Bd. Pat. App. & Inter. 1985). Moreover, the Examiner must provide *objective evidence*, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).

Additionally, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959); see M.P.E.P. § 2143.01. Further, one important indicium of nonobviousness is “teaching away” from the claimed invention by the prior art or by experts in the art at or after the time the invention was made. *U.S. v. Adams*, 383 U.S. 39, 148 U.S.P.Q. 479 (1966).

In the Final Office Action, the Examiner rejected all of the previously pending claims under 35 U.S.C. § 103 over either the Gano reference alone or over the Gano reference in view of the Bol reference. However, whether the cited references are considered alone or in a

hypothetical combination, the Applicant respectfully asserts that the cited references fail to teach *all* of the features recited in each of independent claims 1, 14, 22, 35, 43 and 52. Further, the Applicant asserts that the cited references certainly fail to disclose all of the features recited in the claims depending from claims 1, 14, 22, 35, 43 and 52. Specific deficiencies in the Gano and Bol references are set forth below with respect to the features recited in pending independent and dependent claims.

The Applicant asserts that the Gano reference fails to disclose all of the recited features of amended independent claims 1, 14, 22, 35, 43 and 52. Specifically, for example, the Applicant asserts that the Gano reference fails to teach a sleeve of a casing with a “casing coating” of “stress-absorbing material” that “*substantially covers a circumferential area of the sleeve along a length of the sleeve,*” as recited in claims 1, 14, 22, 35, 43 and 52. (Emphasis added.)

As set for above with respect to the Examiner’s rejection under 35 U.S.C. § 102, in contrast to the present claim features, the Gano reference merely teaches a “composite outer structure 38 that is comprised of a plurality of overlapping, composite band-like plies arranged in a plurality of *opposed helices* 40, 42.” See Gano et al., col. 8, lines 22-26 (emphasis added). Rather than forming a coating that “*substantially covers a circumferential area of the sleeve along a length of the sleeve,*” as recited by the present claims, the opposed helices 40, 42 merely form a “*gridwork helical pattern.*” See Gano et al., col. 8, lines 22-37 (emphasis added).

The Applicant reiterates that the gridwork helical pattern of the Gano reference leaves exposed areas or “passageways” along any length of the casing 12 upon which the outer structure 38 is applied. See Gano et al., col. 8, lines 55-57. Indeed, this is clearly illustrated by Figure 2 of the Gano reference, which shows substantial portions of exposed casing 12. Further, the substantial exposed areas along the casing 12 in the Gano reference are an intended and direct result of the use of the helices to create turbulent effects on drilling fluids and slurries. See Gano et al., col. 8, lines 55-57; col. 8, line 62 – col. 9, line 26. In other words, the areas of the casing 12 that are exposed by the openings in the gridwork helical pattern are apparently necessary to achieve the function described by the Gano reference.

Accordingly, the Applicant asserts that the composite outer structure 38 of the Gano reference is clearly not equivalent to a coating that *substantially covers a circumferential area along a length of the sleeve*, as presently recited. In fact, the Gano reference teaches away from such a coating. Further, nothing in the Bol reference remedies these deficiencies of the Gano reference. Thus, the Applicant asserts that the cited references fail to teach all of the recited features of amended independent claims 1, 14, 22, 35, 43 and 52.

The Applicant also maintains that the Gano reference does not teach a “casing *coating*,” as recited in claims 1, 14, 22, 35, 43 and 52. (Emphasis added). Rather, the Gano reference merely teaches that the helical patterns are formed on the outer surface 32 of the composite liner 26 by applying epoxy resin to a band of fiberglass, cloth tape, or filament that is applied on the outer surface of the composite liner. *See* Gano et al., col. 10, lines 51-54. In other words, it appears that the Gano reference merely teaches that the epoxy resin is essentially taped onto the composite liner 26. The Applicant asserts that one of ordinary skill in the art would not consider this a “casing *coating*,” as recited in claims 1, 14, 22, 35, 43, and 52. (Emphasis added.) Indeed, Applicant stresses that equating the presently recited casing *coating* with epoxy resin coupled to a casing via bands of fiberglass or tape, as taught by the Gano reference, is similar to arguing that a picture hung on a wall is a wall coating.

In the Response to Arguments portion of the Final Office Action, the Examiner cited a definition for “coating” that the Examiner apparently selected to support the argument that the bands of fiberglass taught by the Gano reference are equivalent to a coating. *See* Final Office Action, page 5. Specifically, the Examiner submitted that a coating is “one substance covering another.” *See id.* However, the Applicant respectfully reminds the Examiner that claim language is not merely to be interpreted to support the Examiner’s arguments. Rather, claim language is to be interpreted such that it is consistent with the *specification*. *See In re Prater*, 415 F.2d 1393, 1404-05, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969); *see also In re Morris*, 127 F.3d 1048, 1054-55, 44 U.S.P.Q.2d 1023, 1027-28 (Fed. Cir. 1997); *see also* M.P.E.P. §§ 608.01(o) and 2111. That is, claim terms must be given their plain meaning unless the Applicant has provided a clear definition in the specification. *See In re Zletz*, 893 F.2d 319, 321, 13 U.S.P.Q.2d 1320, 1322 (Fed. Cir. 1989). To clarify, the plain meaning refers to an interpretation by those of ordinary skill in the art. *See In re Sneed*, 710 F.2d 1544,

218 U.S.P.Q. 385 (Fed. Cir. 1983). Accordingly the Applicant asserts that, based on the specification for the present application, the term “coating” does not merely refer to “one substance covering another.” Further, the Applicant stresses that one of ordinary skill in the art would not confuse bands of fiberglass attached (e.g., via a tape) to a sleeve, as essentially described in the Gano reference, with a casing coating (e.g., stress-absorbing material that is *coated* on the sleeve), as presently claimed. Further, nothing in the Bol reference could be combined with the Gano reference to remedy these deficiencies. Indeed, as indicated above, the Gano reference actually teaches away from the present claim feature. Thus, the Applicant asserts that the cited references fail to teach all of the features recited in amended independent claims 1, 14, 22, 35, 43 and 52.

Turning to dependent claims 5, 6, 15, 16, 26, 27, 36, 37, 47, 48, 53 and 54, the Applicant respectfully asserts that the Gano reference certainly fails to disclose that a casing coating is “directly coated” on an exterior surface of a sleeve. In contrast, as set forth above, the opposing helices 40, 42 of the Gano reference are formed by simultaneously applying conventional epoxy resins and winding bands of fiberglass or cloth tape or filaments onto the outer surface of the composite liner 26. *See* Gano et al., col. 8, lines 41-45. Further, nothing in the Bol reference could be combined with the Gano reference to remedy this deficiency. Accordingly, claims 5, 6, 15, 16, 26, 27, 36, 37, 47, 48, 53 and 54 are clearly allowable over the Gano reference.

Regarding dependent claims 17, 28, 38, 49 and 55, the Applicant respectfully asserts that the Gano reference also fails to disclose a casing coating that has “a *substantially consistent thickness* of less than about three inches *completely* covering the circumferential area of the sleeve along the length of the sleeve.” (Emphasis added). Rather, as discussed above, the Gano reference merely discloses a “*gridwork* helical pattern.” *See* Gano et al., col. 8, lines 22-37 (emphasis added). Indeed, the Gano reference actually teaches that “high spots or standoffs” are intentionally formed to centralize the composite liner 26 within an interior of the casing 12. Further, nothing in the Bol reference could be combined with the Gano reference to remedy this deficiency. Indeed, as indicated above, the Gano reference actually teaches away from the present claim feature. Accordingly, claims 17, 28, 38, 49 and 55 are clearly allowable over the cited references.

Regarding dependent claims 58-61, the Applicant asserts that the Examiner has not sufficiently provided support for the recitation of “*determining* a high stress zone . . . and . . . placing the casing into the high stress zone.” (Emphasis added). The Examiner merely stated that “the casing is to be used in multi-lateral wells. Multi-lateral wells are high stress areas. Therefore, the method comprises determining a high stress area of a formation and placing the casing in the high stress area.” See Final Office Action, page 3. The Applicant asserts that the Examiner merely relied on a theory of inherency. Accordingly, the Applicant reminds the Examiner that if the Examiner relies on a theory of inherency, the extrinsic evidence must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 49 U.S.P.Q.2d 1949 (Fed. Cir. 1999) (Emphasis Added). The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. *Id.* In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). The Examiner, in presenting the inherency argument, bears the evidentiary burden and must adequately satisfy this burden. See *id.* Thus, if the Examiner maintains the rejection of claims 58-61 in a future Office Action, the Applicant requests that the Examiner provide sufficient support for the rejection.

New Claims

As set forth above, the Applicant added new claims 62-69. The Applicant believes these claims are patentable over the cited references and in condition for allowance. Therefore, the Applicant requests that the Examiner allow the new claims 62-69.

Regarding newly added dependent claims 62, 64, and 69 the Applicant respectfully asserts that the cited references fail to disclose a sleeve that “comprises ferrous material, aluminum, or titanium.” Rather, the Gano reference merely discloses a composite liner 26 that comprises a composite material (e.g., epoxy and fiberglass cloth material.) See Gano et al., col. 9, lines 34-44. Indeed, the Gano reference suggests that the composite liner 26 is *not*

a conventional metallic casing or liner. *See* Gano et al., col. 8, lines 18-22. Further, the Bol reference cannot be combined with the Gano reference to remedy this deficiency. Indeed, it appears that the Gano reference teaches away from this recited feature.

Regarding newly added dependent claims 63 and 67, the Applicant respectfully asserts that the cited references fail to disclose a casing coating that completely covers the circumferential area of the sleeve along the length of the sleeve.

Regarding newly added independent claim 65, the Applicant respectfully asserts that the cited referenced fail to disclose “a stress absorbing material comprising fibers, wherein the stress absorbing material substantially covers a circumferential area of the sleeve along a length of the sleeve.”

Request for Rejoinder of Withdrawn Claims

Withdrawn claims 12 and 33 depend from claim 1 and 22, respectively. Accordingly, once the examiner determines that independent claims 1 and 22 are allowable, Applicant requests rejoinder of claims 12 and 33, including examination of the formerly nonelected species on the merits. In addition, because independent claims 1 and 22 are in condition for allowance for the reasons stated above, Applicant respectfully submits that claims 12 and 33 are also in condition for allowance. Therefore, Applicant requests that the Examiner provide an indication of allowance for claims 12 and 33.

Payment of Fees and Authorization for Extensions of Time


The Commissioner is authorized to charge the requisite fee of \$790.00 for the RCE and \$250.00 for the new claim fee to the credit card listed on the attached PTO-2038. Applicant does not believe any additional fees are due at this time. If any fees, including fees for extensions of time and other reasons, are deemed necessary to advance prosecution of the present application, at this or any other time, Applicant hereby authorizes the Commissioner to charge such requisite fees to Deposit Account No. 06-1315; Order No. HLBT:0019. In accordance with 37 C.F.R. § 1.136, Applicant hereby provides a general authorization to treat this and any future reply requiring an extension of time as incorporating a request thereof.

Conclusion

Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Respectfully submitted,

Date: May 1, 2007



W. Allen Powell
Reg. No. 56,743
FLETCHER YODER
7915 FM 1960 West, Suite 330
Houston, TX 77070
(281) 970-4545

CORRESPONDENCE ADDRESS

Craig W. Roddy
Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0440
(580) 251-3012